Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

UTILITY PATENT APPLICATION

ATTN:	BOX PATENT APPLICATION	TRANSMITTAL							
CI4 1	-63	Docket No.: 01-605							
Sheet 1	of 2	Date: November 10, 2003							
	U.S. Express Mail Label No.:	EV 323569120 US							
SCO	r Name(s): TT A. BUTZIN; TIMOTHY E. D. ISTOPHER R. MEISCHNER; AN	ELANEY; NERMIN JELACIC; ANTHONY JONES; ND THOMAS G. MUIR							
Title: SYS	TEM FOR MONITORING DILU	TION							
X	Fee Transmittal Form Attached	in Duplicate							
x	Specification and Claim(s)	[Total Pages 15]							
X	Drawing(s)	[Total Sheets 3]							
	FORMAL								
Declara	tion	[Total Pages 6]							
	X Newly Executed (Origin	nal or Copy)							
	Copy From Prior Application (37 CFR § 1.63(d))								
	Deletion of Inve (Signed Stateme	ntor(s) (37 CFR § 1.63(d)(2)) nt Attached)							
x	Assignment Papers (Cover Sheet and Document(s))								
	37 CFR § 3.73(b) Statement (if applicable)								
	English Translation Document (if applicable)								
	Information Disclosure Statement (IDS)/PTO-1449								
	Copies of IDS Citations								
	Preliminary Amendment								
X	Return Receipt Postcard (Specifically Itemized)								
	Certified Copy of Priority Document(s)								
	Other								

Sheet 2 of 2 If a Continuing Application Continuation Divisional Continuation-In-Part (CIP) of prior Application No.: Examiner: ; and Group/Art Unit: Cancel Claims: For Continuations or Divisional Applications only: The entire disclosure of the prior application, from which an oath or declaration is supplied, as set forth above, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. Correspondence Address: \mathbf{x} Customer Number or Bar Code Label: 719 or Correspondence address below: Name: Address: City: Zip Code: State: Country: Attorney/Agent: Byron G. Buck II Registration No.: 40,537 Signature: Date: 10 Nov 2003 Caterpillar Inc.

Complete if Known

(Unassigned)

Approved for use through 04/30/2003. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Filing Date

Application Number

tor FY 2003	First Named Inventor			(Herewi	(Herewith)					
				Scott A	Scott A. Butzin ET AL.					
Effective 01/01/2003. Patent fees are subject to annual revision.	\dashv	Examir	ier Nai	me	(Unassi	(Unassigned)				
Applicant claims small entity status. See 37 CFR 1.27	[Art Uni	t		(Unassigned)					
TOTAL AMOUNT OF PAYMENT (\$) 770		Attorney Docket No. 01-605								
METHOD OF PAYMENT (check all that apply)		FEE CALCULATION (continued)								
Check Credit Card Money Other None	ADDIT	ADDITIONAL FEES								
Order	ity Small Entity									
Deposit Account Deposit	Fee Code	Fee e (\$)	Fee Code	Fee (\$)	Fee Descr	Fee Paid				
Account 03-1129		• • •				rcharge - late filing fee or oath				
Number	1051		2051	_	, , ,					
Deposit Account	1052	50	2052		ourcnarge - late over sheet	rcharge - late provisional filing fee or ver sheet				
Name	1053	130	1053	130 N	lon-English spe					
The Commissioner is authorized to: (check all that apply)	1812	2,520	1812	,	or fiting a reqeu					
X Charge fee(s) indicated below X Credit any overpayments	1804	920*	1804	320 F	vaminer action	equesting publication of SIR prior to				
Charge any additional fee(s) during the pendency of this application Charge fee(s) indicated below, except for the filing fee	1805	1,840*	1805	1.840* R	Requesting public examiner action					
to the above-identified deposit account.	1251	110	2251	55 E	xtension for rep	ension for reply within first month				
FEE CALCULATION	1252		2252	205 E	xtension for rep	nsion for reply within second month				
1. BASIC FILING FEE	1253		2253		xtension for rep	ension for reply within third month				
Large Entity Small Entity	1254	•	2254		xtension for rep	-				
Fee Fee Fee Fee Fee Description Fee Paid Code (\$) Code (\$)	1255		2255		extension for repl	iy within fiπh	month			
1001 750 2001 375 Utility filing fee 770	1401 1402		2401		otice of Appeal ing a brief in support of an appeal					
1002 330 2002 165 Design filing fee	1402		2402		J	equest for oral hearing				
1003 520 2003 260 Plant filing fee	1451		1451		etition to institute a public use proceeding					
1004 750 2004 375 Reissue filing fee 1005 160 2005 80 Provisional filing fee	1452	, · · · · · · ·	2452		Petition to revive - unavoidable					
SUBTOTAL (1) (\$) 770	1453	1,300	2453	650 P	etition to revive	- unintention	ıal			
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2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE	1502	470	2502	235 D	esign issue fee	sign issue fee				
Extra Claims below Fee Paid  Total Claims 20 -20** = 0 x 18 = 0	1503	630	2503	315 PI	lant issue fee					
	1460	130	1460	130 P	etitions to the C	ommisioner				
Independent 3 -3** = 0 X 86 = 0 Claims	1807	50	1807	50 Pi	rocessing fee ur	nder 37 CFF	R 1.17(q)			
Multiple Dependent Large Entity   Small Entity	1806	180	1806			bmission of Information Disclosure Stmt				
Fee Fee Fee Fee Fee Description Code (\$) Code (\$)	8021	40	8021	₩ pr	cording each patent assignment per perty (times number of properties)					
1202 18 2002 9 Claims in excess of 20	1809	750	2809	3/3 (3	37 ČFR 1.129(a)	ing a submission after final rejection 7 CFR 1.129(a))				
1201 84 2001 42 Independent claims in excess of 3	1810	750	2810			or each additional invention to be kamined (37 CFR 1.129(b))				
1203 280 2203 140 Multiple dependent claim, if not paid 1204 84 2204 42 **Reissue independent claims	1801	750	2801		Request for Conti		ination (RCE)			
over original patent	1802	900	1802		lequest for expe		nation			
1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent			l	of	f a design applic	ation				
SUBTOTAL (2) (\$) 0		Other fee (specify)								
**Reduced by Basic Filing Fee Paid  **or number previously paid, if greater; For Reissues, see above  *(\$)  (\$)  (\$)  (\$)										
SUBMITTED BY (Complete (if applicable) )										
Name (Print/Type) Registration No. 4.0 F.2.7 Telephone										
Signature SSSS		(Attorney	Agent)	1307		Date		675-6717		
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This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to provess) an application. Confidentiality is governed by 37 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.